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1 1. An adapter for use with point of sale card readers,

2 the adapter comprising:

- a) a housing, including at least a reader-
- 4 insertable portion capable of being inserted in

5 the card reader;

- $_{6}$  b) a receive circuit in the housing;
- 7 c) a processor in the housing connected to the

8 receive circuit; and

g d) a point of sale interface in the reader insertable portion of the housing connected to

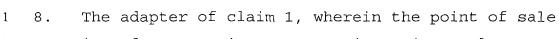
the processor.

2. The adapter of claim 1, wherein the entire housing

is reader hsertable.

3. The adapter of claim 2, wherein the housing is substantially the same size as a conventional credit card.

- 1 4. The adapter of claim 1, wherein the point of sale
- interface comprises a magnetic stripe emulator.
- 1 5. The adapter of claim 4, wherein the magnetic stripe
- 2 emulator comprises at least one electromagnet.
- 1 6. The adapter of claim 4, wherein the magnetic stripe
- 2 emulator comprises a plurality of electromagnets.
- 1 7. The adapter of claim 1, wherein the point of sale
- interface comprises a smart card emulator.



- interface comprises a magnetic stripe emulator and a
- 3 smart card emulator,
- 1 9. The adapter of claim 1, wherein the receive circuit
- comprises an infra-red sensitive device.
- 1 10. The adapter of claim 1, wherein the receive circuit
- 2 comprises a radio-frequency circuit.
- 1 11. The adapter of claim 1, further comprising a
- transmit circuit, wherein the receive circuit and
- 3 the transmit circuit comprise a transceiver.

1 12. The adapter of claim 1, further comprising a data

- buffer connected to the processor,
- 1 13. The adapter of claim 12, wherein the data buffer is
- 2 configured to purge data after a predetermined
- 3 period of time.
- 1 14. The adapter of claim 12, wherein the data buffer is
- 2 configured to purge data after a predetermined
- number of data transfer operations.
- 1 15. The adapter/of claim 1, wherein the processor
- 2 further comprises a data buffer.
- 1 16. The adapter of claim 15, wherein the data buffer is
- configured to purge data after a predetermined
- 3 period of time.



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1 17. The adapter of claim 15, wherein the data buffer is

2 configured to purge data after a predetermined

number of data transfer operations.

1 18. An adapter for use with point of sale card readers,

the adapter comprising:

a) a housing, capable of being inserted in the

card reader;

b) a transceiver in the housing;

6 c) a processor in the housing connected to the

7 transceiver

d) an electromagnet configured to emulate a

magnetic stripe connected to the processor.

1 19. The adapter of claim 18, wherein the housing is

2 substantially the same size as a conventional credit

3 card.

1 20. The adapter of claim 18, further comprising a smart

2 card emulator connected to the processor.

1 21. The adapter of claim 18, wherein the transceiver

2 comprises an infra-red transceiver.

1 22. The adapter of claim 18, wherein the transceiver

2 comprises a radio-frequency transceiver.

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1 23. The adapter of claim 18, further comprising a data

buffer connected to the processor, the data buffer

configured to purge data after a predetermined

period of time.

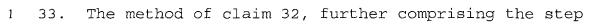
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- 1 24. The adapter of claim 18, further comprising a data 2 buffer connected to the processor, the data buffer 3 configured to purge data after a predetermined
- 4 number of data transfer operations.

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- 1 25. A method of using an adapter with a point of sale 2 card reader, comprising:
- a) selecting a card on an electronic transaction device;
- b) placing the adapter in the card reader;
- 6 c) transmitting information corresponding to the 7 selected card from the electronic transaction 8 device to the adapter;
- d) the adapter converting the information corresponding to the selected card to a format readable by the card reader;
- 12 e) the dard reader reading the converted 13 information.
- The method of claim 25, wherein the step of converting the information corresponding to the selected card to a format readable by the card reader further comprises emulating a magnetic stripe.
- The method of claim 26, wherein the step of emulating a magnetic stripe comprises generating electromagnetic signals.
- 1 28. The method of claim 26, wherein the step of
  2 emulating a magnetic stripe further comprises:
- a) receiving the information corresponding to theselected card:

- b) formatting the information corresponding to the
   selected card to conform with magnetic stripe
   standards; and
- 8 c) dynamically writing the formatted information to 9 an electromagnet.
- 1 29. The method of claim 25, wherein the step of 2 converting the information corresponding to the 3 selected card to a format readable by the card 4 reader further comprises emulating a smart card.
- 1 30. The method of claim 29, wherein the step of 2 emulating a smart card further comprises:
- a) receiving the information corresponding to the
   selected card;
- b) formatting the information corresponding to the
   selected card to conform with smart card
   standards; and
- 8 c) dynamically writing the formatted information to
  9 electrical contacts conforming with smart card
  10 standards.
- 1 31. The method of claim 25, wherein the step of placing 2 the adapter in the card reader occurs before the 3 step of transmitting information.
- The method of claim 25, wherein the step of transmitting information occurs before placing the adapter in the card reader, and further comprising the step of buffering the information corresponding to the selected card in the adapter.



- of purging the information corresponding to the
- 3 selected card after the step of reading the magnetic
- fields at the card reader.
- 1 34. The method of claim 32, further comprising the step
- of purging the information corresponding to the
- selected card after a predetermined period of time.
- 1 35. The method of claim 32, further comprising the step
- of purging the information corresponding to the
- 3 selected card after a predetermined number of data
- 4 transfer operations.
- 1 36. The method of claim 25, further comprising the step
- of the adapter transmitting information to the
- 3 electronic transaction device.
- 1 37. The method of claim 26, wherein the step of the adapter transmitting information to the electronic
- transaction device includes transmitting
- 4 confirmation information to the electronic
- 5 transaction device.
- 1 38. The method of claim 36, wherein the step of the
- adapter transmitting information to the electronic
- 3 transaction device includes transmitting an
- 4 electronic receipt to the electronic transaction
- 5 device.
- 1 39. The method of claim 32, further comprising the step
- of purging the information corresponding to the
- 3 selected card after the step of the adapter

- 4 transmitting information to the electronic
- 5 transaction device.
- 1 40. An electronic transaction device adapted for use
- with point of sale card readers, the electronic
- 3 transaction device comprising:
- a) a housing, adapted to fit in a pocket or purse,
- 5 the housing including at least a reader-
- insertable portion capable of being inserted in
- 7 the card reader;
- b) a processor, enclosed in the Housing, adapted
- 9 to process account information relating to at
- least one service institution account
- associated with a user of the electronic
- 12 transaction device
- c) a display, connected to the processor and
- adapted to display the account information,
- d) memory, connected to the processor and adapted
- to store the account information; and
- e) a point of sale interface in the reader
- insertable portion of the housing, connected to
- the processor and adapted to transmit the
- 20 account information to a point of sale card
- 21 reader.
- 1 41. The adapter of /claim 40, wherein the point of sale
- interface comprises a magnetic stripe emulator.
- 1 42. The adapter pf claim 40, wherein the point of sale
- interface comprises a smart card emulator.

1 43. The adapter of claim 40, wherein the point of sale
2 interface comprises a magnetic stripe emulator and a
3 smart card emulator.

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